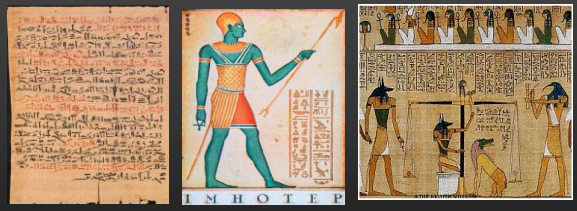


**Lage rugpijn  
in  
verzekeringsgeneeskundig  
perspectief**

Marc DU BOIS, MD, PhD



**INHOUD**

- ☐ Diagnostiek
- ☐ Screening op langdurig verzuim

Getuigschrift van arbeidsongeschiktheid + Vragenlijsten

- ☐ Diagnostiek
- ☐ Voorafbestaande toestand
- ☐ Causaliteit
- ☐ Risico
- ☐ Capaciteit
- ☐ Tolerantie

Consultatie

2

**Getuigschrift van  
arbeidsongeschiktheid**

**Actiepunten**

- Verificatie diagnostiek
- Screening : bepalen risico op langdurig verzuim (vragenlijsten)

3

**Diagnostiek : NSLRP**

- lumbago, myofasciaal syndroom
- lumbale spierspasmen
- mechanisch ruglijden
- overbelaste rug
- discus hernia
- dorsalgie
- ischialgie



Beschouw op de aangifte alle varianten van lage rugpijn als diagnosen van niet specifieke lage rugpijn inclusief discus hernia. Rugoperaties en rugpijn tijdens zwangerschap alsmede comorbiditeit zijn uitgesloten.

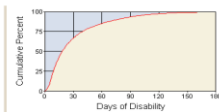
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## Screening ?



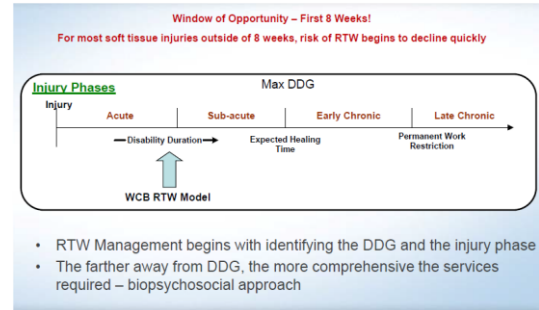
DURATION IN DAYS

Job Classification	Minimum	Optimum	Maximum
Sedentary	1	3	7
Light	3	7	14
Medium	7	21	42
Heavy	7	35	84
Very Heavy	7	42	91



Dr. Reed : The Medical Disability Advisor Workplace Guidelines for Disability Duration<sub>5</sub>

## Screening !



Algemene regel : arbeidsongeschiktheidsduur < herstelduur

## Screening !

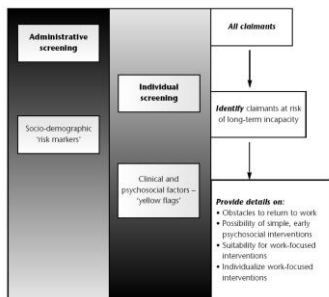


Figure 7 Types and purposes of screening: administrative and individual psychosocial screening remain interrelated over time, although their relative utility may vary.

## Screening !

3-item questionnaire en/of  
10-item ørebro muskuloskeletal pain  
questionnaire en/of 9-item StarT Back  
Screening Tool

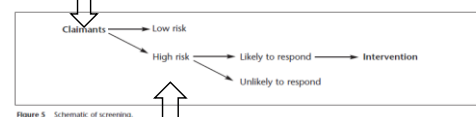
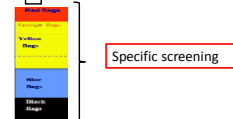
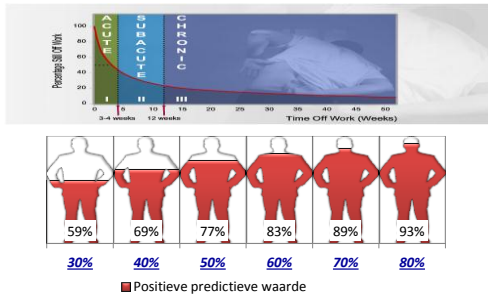


Figure 5 Schematic of screening.



### Screening Verhogen van de PPV



Frank J et al. Preventing disability from work-related low-back pain. New evidence gives new hope—is we can just get all the players onside. *Can Med Assoc J* 1998;158:1625–1631

### Screening Sensitiviteit !

#### What CUTOFF should We Choose ??

- If a **disease is bad** and early diagnosis is critical for a good result, and if treatment has low morbidity, we want **high SENSITIVITY**.
- But, IF the disease isn't serious**, If untreated there are not usually immediate serious consequences (*the patient stays at work and frequently recovers without treatment*), and If treatment (surgery) frequently fails to relieve the symptoms and results in the patient leaving the workforce, and applying for disability, we want the **high SPECIFICITY, LOW SENSITIVITY** cutoff.

10

### Screening Verhogen van sensitiviteit

#### Parallel testing (simultaneous testing):

- 4 possible outcomes
  - T1+ T2 + = positive
  - T1+ T2 - = positive
  - T1 - T2 + = positive
  - T1 - T2 - = negative
- Individual tested positive on either test is classified as positive
- Increase Se, Decrease Sp
- Use when false negative is a main concern e.g. Importation

$$\text{Net sensitivity} = \text{sens 1} + \text{sens 2} - (\text{sens 1} \times \text{sens 2})$$

$$\text{Net specificity} = \text{specificity test 1} \times \text{specificity test 2}$$

11

### Screening Resultaat



- Hoog risico op langdurig verzuim : oproep ASAP
- Laag of gemiddeld risico op langdurig verzuim : oproep na 3 maand arbeidsongeschiktheid

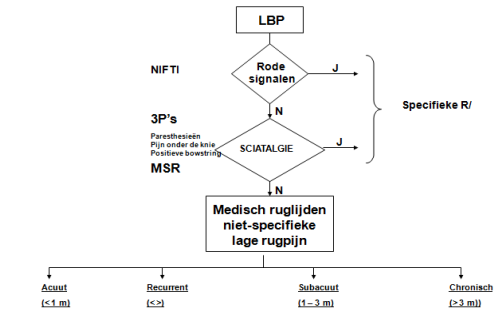
12

## Consultatie

### Actiepunt

- Verificatie diagnostiek NSLRP
- Voorafbestaand toestand?
- Causaliteit?

## Diagnostiek NSLRP



Gozna E. (2002) *Back to Basics: An Algorithmic Approach to Low Back Pain*

## Voorafbestaande toestand

Overgang van zelfstandige naar statuut van loontrekkende op basis van degeneratief discus lijden

### Causaliteit

Duidelijke plotse gebeurtenis : arbeidsongeval



## Consultatie : risico

### Actiepunten

- Bepaal het beroepsrisico in geval van recurrenente lage rugpijn

### Consultatie : risico

- **Risk:** basis for **physician imposed** "work restrictions" (line on forms).  
What the patient **should NOT** do, based on risk.  
– **MAY NOT** drive a commercial vehicle with **epilepsy**.

"Arbeidsongeschiktheid is hij/zij die om zijn/haar of andermans ernstig bedreigde gezondheid te beschermen of te herstellen, geheel of gedeeltelijk niet in staat is een passende arbeid op zich te nemen"

Van toepassing op recurrente lage rugpijn met diverse perioden van arbeidsongeschiktheid binnen het jaar. Arbeidsgerelateerd?

17

### Consultatie : risico

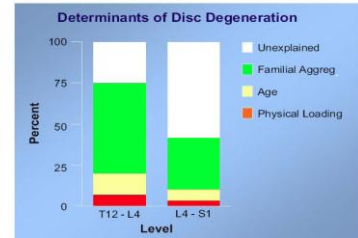


Fig. 7. The variability (adj.  $R^2$ ) in qualitative disc degeneration summary scores explained by physical loading, age, and familial aggregation (proxy of heredity) demonstrated that significantly more variability remained unexplained in the L4-S1 disc levels. (Modified from *Spine*, Battie et al. 1995 [36]).

18

### Consultatie : risico

**Checklist risicofactoren**

**A Handmatig tillen/dragen van lasten**

= direct met de handen opvoeren/verplaatsen/zonder gebruik van mechanische hulpmiddelen verplaatsen

A1. Hastentijd de werknemer > 10% van de werkdag lasten > 15 kg?  
JA, vul score 7 in en ga verder naar B NEE, ga naar A2

A2. Hastentijd de werknemer > 25 per minuut gedurende in totaal > 2 uur per werkdag lasten > 5 kg, of > 15 per dag lasten > 25 kg?  
JA, vul score 4 in NEE, vul score 0 in

**B Tuggen/draaien van de romp**

= wanneer rugpijn, nekpijn of pijn in/of draaien van de romp (b.v. de aangetroffen lumbale heft betrekking op de totale lumbale waarden in de genoemde romphouding is geweest gedurende een werkdag)

B1. Werkt de werknemer > 1/2 uur per werkdag met de romp > 45° gebogen m/vf gedraaid?  
JA, vul score 7 in en ga verder naar C NEE, ga naar B2

B2. Werkt de werknemer > 2 uur per werkdag met de romp > 20° gebogen m/vf gedraaid?  
JA, vul score 5 in NEE, vul score 0 in

**C Lichaamsmetingen**

= gemiddelde gemiddelde trillingen over 8 uur, en de daadwerkelijke blootstelling per werkdag korter is kan het volgende gemiddelde berekend worden met de formule:  $dB = \text{exp}^{-10/10}$   
(dB = trillingen gemiddelde over 8 uur, exp = trillingen (gemiddelde of gemiddeld, 10 = dagelijkse blootstellingduur)

C1. Is de werknemer 5 jaar blootgesteld aan trillingen > 1 m/s<sup>2</sup> gemiddeld per dag?  
JA, vul score 5 in NEE, ga naar C2

C2. Werkt de werknemer blootgesteld aan trillingen > 0,5 m/s<sup>2</sup> gemiddeld per dag?  
JA, vul score 3 in NEE, vul score 0 in

**Totaalscore (0-19)**

19

### Consultatie : risico

#### Kans op arbeidsgerelateerdheid

Lees de leeftijdsspecifieke kans op arbeidsgerelateerdheid behorend bij de blootstelling van de werknemer af uit onderstaande tabel.

Totaalscore	Leeftijd (jaar)		
	< 35	35-45	> 45
0	0	0	0
1	7	7	6
2	14	13	12
3	20	18	17
4	26	23	22
5	31	28	26
6	35	32	30
7	39	35	33
8	43	39	36
9	46	42	39
10	49	44	42
11	52	47	44
12	55	49	46
13	57	51	48
14	59	53	50
15	61	54	51
16	62	56	53
17	64	57	54
18	65	58	55
19	66	60	56

De horizontale streep in de kolommen geeft de grens van 50% kans op arbeidsgerelateerdheid aan.

20

## Consultatie : risico

Indien recurrenente rugpijn  
arbeidsgerelateerd is (laatste beroep)

- FBZ preventieprogramma
- Referentieberoepen
- Herscholing

21

## Consultatie : capaciteit

## Actiepunten

- Evalueer en vergroot de capaciteit tot het niveau van sub MMI

22

## Consultatie : Capaciteit

- **Capacity:** basis for **physician described**  
"work limitations" (line on forms)

What the patient is **NOT** able to do.

- **CANNOT** flex or abduct right arm at the shoulder more than 80°, thus **cannot** reach overhead controls on a factory press.

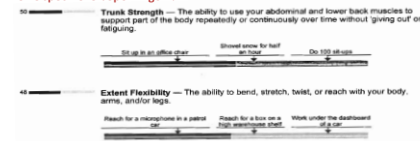
23

## Consultatie : Capaciteit

## Welke globale beperkingen ?

Werkbeperking	0-33%	34-66%	67-100%	Verspreide energie	Beroep	Werkzaam
Sedentair	0-5 kg			13-21 METS (100-130 Watt)	Bureauijver, autorijden	Bed optillen, koken
Licht	10 kg	5 kg		22-33 METS (137-200 Watt)	Automatische bankopening, portier	Verpakkingen, afpakken
Middelmatig	10-25 kg	5-10 kg	5 kg	34-43 METS (241-350 Watt)	Handwerk, lussen, behangen	Schroeven, meubels verplaatsen
Zwaar	25-50 kg	10-25 kg	5-10 kg	64-75 METS (356-465 Watt)	Schepwerk, opheffen	Handmatig zagen
Zeer zwaar	> 50 kg	> 25 kg	> 10 kg	> 75 METS (466 Watt)	Zwaar spitten, graven	Houthakken

## Welke specifieke beperkingen ?



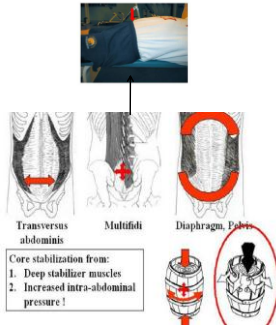
Is de MMI (Maximum Medical Improvement) bereikt?

**CAPACITEIT : GENEESHEER BESLIST DOOR BEPERKINGEN TE BESCHRIJVEN**

24

## Consultatie : Capaciteit

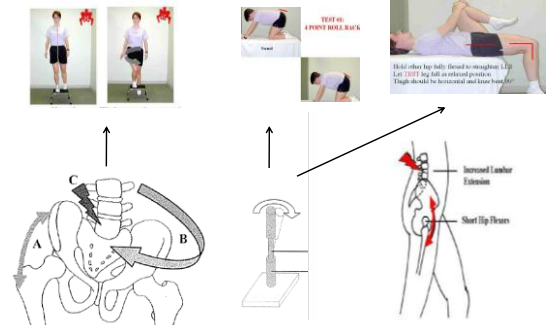
### Musculaire onbalans



25

## Consultatie : Capaciteit

### Musculaire onbalans



26

## Consultatie : Capaciteit

### EXAMPLES OF ACTIVE AND PASSIVE TREATMENTS

#### ACTIVE (Indicate % \_\_)

- \_\_\_ Aerobic Conditioning
- \_\_\_ Strength Training – General
- \_\_\_ Strength Training – Injury Specific
- \_\_\_ Muscular Imbalance Correction
- \_\_\_ Postural Correction Exercise
- \_\_\_ Core Strengthening
- \_\_\_ Stretching – Hip flexors/extensors
- \_\_\_ Work Simulation Activities
- \_\_\_ Aquatic Exercise Therapy
- \_\_\_ Education regarding importance of activity

#### PASSIVE (Indicate % \_\_)

- \_\_\_ Heat/Ice
- \_\_\_ Electric Stimulation
- \_\_\_ Ultrasound
- \_\_\_ Traction (Manual/Mechanical)
- \_\_\_ Interferential Current
- \_\_\_ Acupuncture
- \_\_\_ Laser
- \_\_\_ T.E.N.S.
- \_\_\_ Manual Therapy
- \_\_\_ Massage

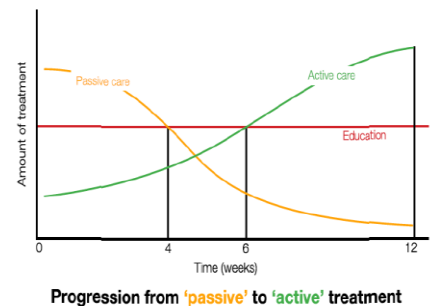
“When the diagnosis is vague the treatments are many” (Hadler 1994)

3 vragen :

- 1) Wat moest je precies doen bij de kinesist?
- 2) Wat doe je thuis ?
- 3) Toon me je oefeningen

27

## Consultatie : Capaciteit

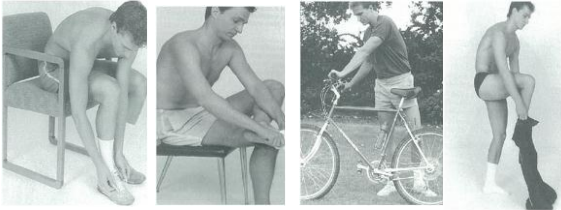


28

28

## Consultatie : Capaciteit

## Consistentie



29

## Consultatie : Capaciteit

Werk kan mede de actieve behandeling zijn die capaciteit opbouwt. Overweeg progressieve werkhervatting.

The AMA encourages physicians everywhere to advise their patients to return to work at the earliest date compatible with health and safety and recognizes that physicians can, through their care, facilitate patients' return to work.

30

## Consultatie : tolerantie

## Actiepunten

- verhoog de tolerantie door de patiënt te motiveren en alarmsignalen aan te pakken. Vereist multidisciplinaire samenwerking.

31

## Consultatie : Tolerantie

$$\text{Motivatie} = \frac{[\text{Kans op succes}] \times [\text{Waarde van arbeid}]}{[\text{Kost van de inspanning}]}$$

[Kans op succes] = zelfvertrouwen o.a. weerspiegeld in de verwachte arbeidsongeschiktheidsduur en door patiënten gerust te stellen

[Waarde van arbeid] = inkomen, status, ...

[Kost van de inspanning] = pijn, moeheid, ...

32



### Consultatie : Tolerantie

$$Motivation = \frac{Expectancy \times Value}{Impulsiveness \times Delay}$$

Piers Steel. *The Procrastination Equation: How to Stop Putting Things Off and Start Getting Stuff Done*, 2010

33

### Consultatie : Tolerantie value & impulsiveness

Biological	<b>Red flags</b>	<ul style="list-style-type: none"> <li>Serious pathology</li> <li>Co-morbidity</li> </ul>	Neurological progression Infection Fracture Tumour Inflammation COMORBIDITIES
Personal and environmental Factors (Psychosocial)	<b>Orange flags</b>	<ul style="list-style-type: none"> <li>Depression</li> <li>FISD</li> </ul>	Drugs Depression Distress Disconnect Dishonesty
	<b>Yellow flags</b>	<ul style="list-style-type: none"> <li>Unhelpful (eg. avoidant) coping strategies (eg. resting)</li> <li>Emotional distress</li> <li>Passive role in recovery</li> <li>Overly solicitous carers</li> </ul>	Discord Dissatisfaction Dull Deadended Dangerous
	<b>Blue flags</b>	<ul style="list-style-type: none"> <li>Perceived low social support at wk.</li> <li>Perceived unpleasant work</li> <li>Low job satisfaction</li> <li>Perception of excessive demands</li> </ul>	
Environmental (systemic) (Main et al., 2008)	<b>Black flags</b>	<ul style="list-style-type: none"> <li>Legislative criteria for compensation</li> <li>Nature of workplace (eg. heavy work)</li> <li>Threats to financial security</li> </ul>	Social law Social policy

34

### Consultatie : Tolerantie Expectancy

De verwachte arbeidsongeschiktheidsduur moet snel kenbaar gemaakt worden

Cole DC et al. *Early Claimant Cohort Prognostic Modelling Group. Institute for Work & Health, Toronto CMAJ. 2002 Mar 19;166(6):749-54. Listening to injured workers: how recovery expectations predict outcomes—a prospective study.*

“...Judging one’s recovery as much better than expected resulted in a 30% (95% confidence interval [CI] 9%–46%) faster rate of stopping receiving benefits (and likely returning to work) compared with judging one’s recovery as much worse than expected...”

Turner JA, et al. *Spine. 2006 Mar 15;31(6):682-9. Worker recovery expectations and fear-avoidance predict work disability in a population-based workers’ compensation back pain sample.*

**CONCLUSIONS: Among individuals with acute work-related back pain, high pain and disability, low recovery expectations, and fears that work may increase pain or cause harm are risk factors for chronic work disability**

Du Bois M, Donceel P. *Eur Spine J. 2008 Mar;17(3):380-5. Epub 2008 Jan 3. A screening questionnaire to predict no return to work within 3 months for low back pain claimants.*

“...Especially, patient’s own prediction is a very important risk factor for disability and opens the perspective for modification by medical reassurance...”

35

### Consultatie : Tolerantie Expectancy

TABLE 1. MAIN MESSAGES GIVEN IN THE STANDARD COUNSELING

- There is no sign of any serious disease but a bad low back condition.
- A crack in a disc can cause inflammation and a reflex activation in muscles, leading to stiffness and pain.
- Being too careful and rest could worsen the stiffness and pain.
- Fear and anticipation of pain could increase muscular activation and pain.
- Light activity would not further injure the back, but rather enhance the repair process.
- 50% of the patients resume work safely in 6 weeks and the majority within 3 months of sick leave.
- Do not let the low back pain be your guide.

Du Bois M, Donceel P. *Guiding low back claimants to work: a randomized controlled trial. Spine (Phila Pa 1976). 2012 Aug 1;37(17):1425-31.*

36

## Consultatie : Tolerantie Delay

**Update 2008**

**The Personal Physician's Role in Helping Patients with Medical Conditions Stay at Work or Return**

**Position Statement:**  
The American College of Occupational and Environmental Medicine (ACOEM) recognizes that:

- a fundamental purpose of medical care is to restore health, optimize functional capability, and minimize the destructive impact of injury or illness on the patient's life;
- medically related withdrawal from normal social roles, including work, is destabilizing and may be detrimental to a patient's mental, physical, and social well-being;
- maintaining or returning a patient to all possible relevant life activities as soon as is safely possible has many beneficial psychosocial and physical effects.

• **AMA Policy and Directives 2004**  
The AMA encourages physicians everywhere **to advise their patients to return to work at the earliest date compatible with health and safety**, and recognizes that physicians can, through their care, facilitate patients' return to work.

• **CMA Policy , Update 2000**  
The CMA recognizes the importance of a patient returning to all possible functional activities relevant to his or her life **as soon as possible** after an injury or illness.

37

## Consultatie : Tolerantie Ziektegedrag als signaal

### Possible Cerebral Origin of the Symptoms Usually Classed under Railway Spine

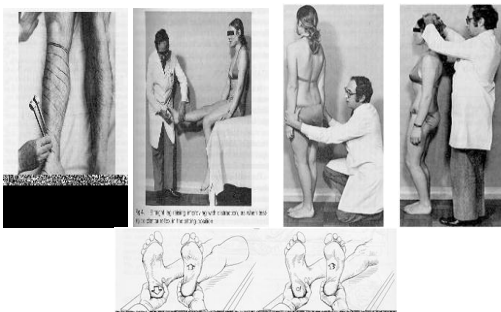
G. L. WALTON, M. D.  
Boston Med Surg J 1883; 109 337-340 | October 11, 1883 | DOI: 10.1056/NEJM18831011091501

TABLE 2	
Waddell's signs	
CATEGORY	SIGNS
<b>Tenderness</b>	Superficial: light pinching causing pain = positive Nonanatomic: deep tenderness over a wide area = positive
<b>Simulation</b>	Asial loading: downward pressure on the head causing low back pain = positive Rotation: Examiner holds shoulders and hips in same plane and rotates patient. Pain = positive
<b>Distraction</b>	Straight leg raise causes pain when formally tested, but straightening the leg with hip flexed ninety degrees to check Babinski does not
<b>Regional</b>	Weakness: multiple muscles not enervated by the same root Sensation: glove and stocking loss of sensation.
<b>Overreaction</b>	Excessive show of emotion

Blom A, Taylor A, Whitehouse S, Orr B, Smith E. A new sign of inappropriate lower back pain. *Ann R Coll Surg Engl.* 2002 Sep;84(5):342-3.

38

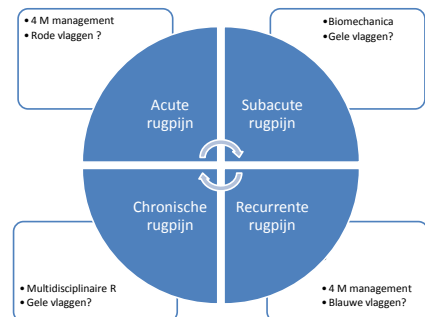
## Consultatie : Tolerantie Ziektegedrag als signaal



Waddell G, McCulloch JA, Kummel E, Venner RM. Nonorganic physical signs in low-back pain. *Spine (Phila Pa 1976).* 1980 Mar-Apr;5(2):117-25.

39

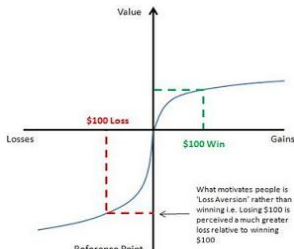
## Consultatie : Tolerantie Conformiteit behandelplan



40

## Consultatie : Tolerantie Framing

Kahneman and Tversky: Prospect Theory  
applied to gambling wins/losses



Mensen zijn niet altijd rationeel bij het maken van keuzes. Het gaat er bijvoorbeeld om dat mensen zekerheid prefereren wanneer het om winst gaat (bijvoorbeeld toegenomen levensverwachting), maar juist meer onzekerheid wordt geaccepteerd wanneer het gaat om het vermijden van een verlies (bijvoorbeeld het risico te sterven tijdens een operatie). Ook hechten mensen meer waarde aan proportionele dan aan absolute verschillen.

Kahneman en Tversky (The Framing of Decisions and the Psychology of Choice: Science 1981;211:453-458

Verma AA, Razak F, Detsky AS. Understanding Choice. Why Physicians Should Learn Prospect Theory. JAMA. 2014;311(6):571-572

41

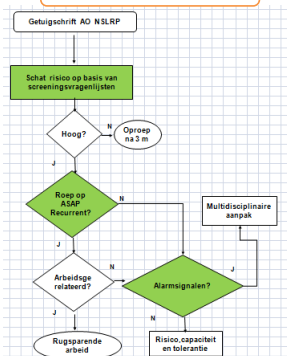
## Consultatie : Tolerantie Cialdini's 6 Persuasion Principles



Cialdini, R. B. (2001). Influence: Science and practice (4th ed.). Boston: Allyn & Bacon

42

## Besluit



43